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EXAMINER

PARRA, OMAR S

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/727,639	Applicant(s) PARK ET AL.	
	Examiner OMAR PARRA	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed 07/2/2008, with respect to the rejection(s) of claim(s) 1-17 under 35 USC 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a new interpretation of the previous utilized reference and a newly found reference.

As a response to applicant's remarks filed on 07/ 24/2008, the examiner states that it was not clear at the time of the response which of the simultaneously filed papers (referring to the "Amendment After Final" and the "Alternative Amendment", both filed on 07/02/2008) was the actual response to the Examiner's action mailed on May 02, 2008. Being the amendments independent to each other, and having the "alternative" nature of the second one, the examiner selected to respond to what seemed to be the actual response: the "Amendment After Final" paper. However, although a new ground of rejection is presented, the examiner, for the purpose of expediting prosecution, believes necessary to respond to some of the applicant's arguments on the "Alternative Amendment" regarding the Rakib reference, which is still utilized in the present Office Action.

In regards to applicant's argument: "the foregoing assertion [... Rakib '658 teaches a gateway which contains settop box components and includes a data receiving unit, an extracting unit, transport stream forming unit, a data transforming unit

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and a processing unit ... appears nowhere in the specification of Rakib '658" (page 11, paragraphs 1 and 2), the examiner respectfully disagrees. Rakib shows that the gateway has settop box components and it works as a receiver (tuners, video demod, video decoder, etc; Fig. 4A, [0039]; [0051]; [0088]). However, for purposes of expediting prosecution, another ground of rejection is presented.

In regards to applicant's requested written clarification from the examiner (1, page 12), a considered better explained rejection follows for purposes of expediting prosecution.

Additionally, the applicant argues that: *"None of these two components (i.e., host microprocessor 128 and routing circuit 86) teaches "a data receiving unit being connected to one of a digital subscriber line port and an Ethernet port, ..., said data receiving unit making an identification of the received signals by determining when the received signals are asynchronous transfer mode data, when the received signals are Internet protocol over asynchronous transfer mode data, and when the received signals are Internet protocol data, said data receiving unit transmitting information corresponding to the received signals in dependence upon the identification". To this matter, the examiner respectfully disagrees.*

As per the claim language, the applicant calls for "a data receiving unit being connected to one of a digital subscriber line port and an Ethernet port...". No indication is made that the receiving connected unit has to be a single or the same unit connected to one of the ports. Routing circuit 86 is connected to the ADSL modem 182 (Fig. 4A;

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[0170]-[0174]) and to Ethernet ports 18 and 20 ([0080]). It is also possible to interpret that the host microprocessor (128, Fig. 4A) receives the Ethernet packets from the Ethernet ports ([0087]-[0089]) and the routing circuit 86 receives the input from the ADSL modem (182, Fig. 4A; [0170]-[0174]).

The applicant also argues that *“Protocol indicator contained in each data signal does not necessarily teach that a receiving unit receiving the data signal MUST have functionality of identifying the protocol of the data signal, and does not necessarily show an intent of implanting functionality of identifying the protocol of the data signal into the receiving unit, because the existence of the header indicating data format is not equivalent to the existence of a stage of identification of data packet at the receiving unit...”*. To this matter the examiner respectfully disagrees.

Given the diversity of packets received (ATM, IP or IP over ATM; [0049]-[0051]; [0057]; [0059]; [0061]-[0068]; [0087]-[0096]; [0153]), inherently, the data needs to have information data about the data format since the next step is reformatting it into Ethernet packets for sending it down to the requesting devices ([0168]; [0171]-[0170]). Therefore, the format of the received packets needs to be identified in order to change their format.

In response to applicant's argument (2): *“Rakib '658's IP video circuit 158 handles only IP packets”* (page 14 and 15, last and first paragraph, respectively), the examiner respectfully disagrees.

Rakib teaches that the IP video circuitry monitors the received packets, extracts the video content from IP and/or non-IP packets (ATM cells) for further routing to the request devices ([0166]-[0167]).

In response to applicant's argument (3), page 15, a new ground is presented, in which the routing circuit 86 also performs the formation of the packets that belong to a specific video adapter and sends them through the LAN 20 ([0087]-[0089]; [0168]).

In response to applicant's arguments (4), page 16, the video adapter 30 receives the formed packets of the video stream from LAN network, and processes them to form a stream to be displayed by a video display ([0080]-[0083] and video display 246, 254 and 260, Fig. 5). This video adapter is connected to the gateway through the LAN 20 and can be broadly considered part of the gateway; however, a new ground of rejection is presented in which the gateway is a settop box, making the data transforming unit (the video adapter 30) an integral part of the gateway/settop box.

In response to applicant's argument (5), page 16, *"Comparing Rakib '658 and the applicant's settop box as defined in Claim 1, the applicants' settop box not only has a simpler structure and but also has less components than Rakib '658. Therefore, the applicants' settop box is advantageous compared to Rakib '658's gateway in respect of design and manufacture"*, the examiner respectfully disagrees since the number of components is almost irrelevant when it comes to functionality of two devices. As for

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examining purposes, the examiner has to give the broadest reasonable interpretation to the claims. However, a new ground of rejection is presented below.

Also, applicant argues about claims 10-17 saying that his claimed invention is a settop box and compares components of the claimed invention to Monta's cherry picker as presented on the previous rejection. To this matter, the examiner disagrees.

As response to applicant's arguments, the recited language of claim 10 calls for an 'apparatus' and not for a 'settop box' as argued by the applicant. Although claims have to be read in light of the specification, the examiner can not incorporate limitations from the specification to the claims. The claimed 'apparatus' can be anything, including the apparatus disclosed by the Monta reference, of record. Therefore, the examiner respectfully believes that the art of record still reads on claims 10-17 of the applicant's invention as claimed. For the remaining claims, a new ground of rejection is presented.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **1-9** rejected under 35 U.S.C. 103(a) as being unpatentable over Rakib et al. (hereinafter 'Rakib', Pub. No. 2004/0172658) in view of Chang et al. (hereinafter 'Chang', Pub. No. 2003/0093804).

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(86 and 128, Fig. 4A or just 128, which are connected to a DSL modem input- 182, Fig. 4A or 378, Fig. 8- and to a Ethernet input - 18 and 20 Figs. 4A and 8; [0087])

Regarding claims 1,3 and 8, The combined teachings of Rakib and Chang teach an apparatus for controlling a digital transport stream **(Gateway 14, Figs. 3, 4A, 4B, 8; which contains settop box components, [0039] and multiple cards for connecting to different types of networks)**, comprising:

a data receiving unit being connected to a digital subscriber line port and an Ethernet port **(Routing circuit 86 is connected to the ADSL modem 182 (Fig. 4A; [0170]-[0174]) and to Ethernet ports 18 and 20 ([0080]. Or in the alternative, host microprocessor 128, Fig. 4A)receives the Ethernet packets from the Ethernet ports ([0087]-[0089]) and the routing circuit 86 receives the input from the ADSL modem 182, Fig. 4A; [0170]-[0174])** , said data receiving unit receiving signals from at least one selected from among an asynchronous transfer mode network and an Internet protocol network **([0037]; [0049]-[0053]; [0061]-[0068]; [0087]-[0096]))**, the signals corresponding to at least one selected from among asynchronous transfer mode digital broadcasting, asynchronous transfer mode video on demand, Internet protocol mode digital broadcasting, and Internet protocol video on demand **([0037]; [0049]-[0053]; [0056]-[0059]; [0080]-[0084]; [0151]-[0153]; [0166]; [0170]-[0174]; [0184]-[0185])**, said data receiving unit an identification of the received signals by determining when the received signals are asynchronous transfer mode data, when the received signals are Internet protocol over asynchronous transfer mode data, and when the received signals are Internet protocol data, said data receiving unit transmitting information

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corresponding to the received signals in dependence upon the identification **(Given the diversity of packets received , ATM, IP or IP over ATM; [0049]-[0051]; [0057]; [0059]; [0061]-[0068]; [0087]-[0096]; [0153], inherently, the data needs to have information data about the data format since the next step is reformatting it into Ethernet packets for sending it down to the requesting devices ([0168]; [0171]-[0170]). Therefore, the format of the received packets needs to be identified in order to change their format);**

an extracting unit determining when the transmitted information corresponds to a portion of a Moving Picture Experts Group transport stream and when the transmitted information corresponds to Internet protocol packet data, said extracting unit extracting valid cells from asynchronous transfer mode cells when the transmitted information includes asynchronous transfer mode cells **(The IP video circuitry 158 monitors the received packets, extracts the video content from IP and/or non-IP packets (ATM cells) for further routing to the request devices, [0166]-[0167], which gets all the video packets- ATM, IP, or IP over ATM- or video data and recognizes if they are sent to video client –if they contain MPEG data- and encapsulates it in IP packets –or other type of format, ATM, etc- and send them to the routing process 86, which associates the IP address to an Ethernet address and send it to the requesting device);**

a transport stream forming unit receiving the extracted valid cells, modifying the extracted valid cells to form modified cells by removing a predetermined byte of head information and overhead information from the extracted valid cells, and by forming one

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Moving Picture Experts Group transport stream by reassembling four modified cells
(Routing circuit 86 also performs the formation of the packets that belong to a specific video adapter and sends them through the LAN 20,[0087]-[0089]; [0168]).

a data transforming unit **(the video adapter 30 receives the formed packets of the video stream from LAN network, and processes them to form a stream to be displayed by a video display ([0080]-[0083] and video display 246, 254 and 260, Fig. 5)** transforming the Moving Picture Experts Group transport stream transmitted from said transport stream forming unit to be displayed by a video display **(246, 254 and 260, Fig. 5);** and

a processing unit reassembling asynchronous transfer mode cells, transmitting received data to said data transforming unit **(242, Fig. 5; [0191]).**

On the other hand, Rakib does not explicitly teach that the apparatus is a settop box and that the data transforming unit is part of the settop box.

However, in an analogous art, Chang teaches a settop box device (22, Figs. 1-3) that acts as a home gateway to multiple devices (Fig. 3) and receiving different inputs through different ports ([0018]) such as a DSL and an Ethernet port ([0024]-[0025]; [0036]-[0037]). Chang's settop box receives the different type of data and after identifying where the data is heading, it routes it to the different devices at home through different paths ([0020]-[0021]). Being a settop box decoding video for TV 216, directly connected to it, there is need for the settop box to have a LAN for sending the content for at least that TV ([0015]; [0020]-[0021]). Additionally, Chang teaches that before sending the content to the recipient home devices, the settop box does

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bandwidth management and allocates the content to the different recipient units ([0038]-[0041]).

Therefore, it would have been obvious to an ordinary skilled in the art at the time of the invention to have modified Rakib's gateway with the direct connection of a television set as taught by Chang for the benefit of reducing the number of devices at a home network (Chang, [0003]) and for gaining bandwidth utilization management.

Regarding claims 2 and 7, the combined teachings of Rakib and Chang teach a settop box, with the Moving Picture Experts Group transport stream corresponding to an asynchronous transfer mode Moving Picture Experts Group transport stream **(Given that the LAN can be an ATM LAN, [0049], makes the MPEG transport sent to the network adapter a ATM MPEG transport stream)**.

Regarding claims 4, the combined teachings of Rakib and Chang teach a settop box with said data transforming unit comprising:

a decoding unit decoding the Moving Picture Experts Group transport stream transmitted from said transport stream forming unit **(246, Fig. 5)**; and

an encoding unit encoding the Moving Picture Experts Group transport stream decoded by said decoding unit to be displayed by the video display **(260, Fig.5)**.

Regarding claim 5, the combined teachings of Rakib and Chang teach a settop box further comprising:

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a processing unit receiving the Internet protocol over asynchronous transfer mode data from said digital subscriber line receiving unit, said processing unit receiving the Internet protocol data from said digital subscriber line receiving unit, said processing unit extracting valid cells from the Internet protocol over asynchronous transfer mode data and the Internet protocol data received from said digital subscriber line **(128 and 86, Fig. 4A, receiving ATM and IP packets from ADSL modem input -where other protocols can be used such as IP over ATM - [0057]-[0059]. After reception, they are put into a bus from which 158 on Fig. 4A gets all the video packets- ATM, IP, or IP over ATM- or video data and recognizes if they are sent to video client –if they contain MPEG data- and encapsulates it in IP packets –or other type of format, ATM, etc- and send them to the routing process 86, which associates the IP address to an Ethernet address and send it to the requesting device);**

said processing unit receiving the Internet protocol data from said Ethernet receiving unit and extracting valid cells from the Internet protocol data received from said Ethernet receiving unit **(IP or Ethernet data is received from the local network devices, which depends on the type of protocol used for the LAN;[0049]; [0087]-[0096]).**

Regarding claim 6, the combined teachings of Rakib and Chang teach a settop box further comprising:

a control unit determining when the valid cells extracted from the asynchronous transfer mode cells by said extracting unit correspond to at least one selected from

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among the Moving Picture Experts Group transport stream and general Internet data, determining when the valid cells extracted from the Internet protocol over asynchronous transfer mode data by said processing unit correspond to at least one selected from among the Moving Picture Experts Group transport stream and the general Internet data, and determining when the valid cells extracted from the Internet protocol data by said processing unit correspond to at least one selected from among the Moving Picture Experts Group transport stream and the general Internet data, said control unit re-assembling the cells in dependence upon the determining, said control unit transmitting the Moving Picture Experts Group transport stream to said decoding unit, and said control unit transmitting the general Internet data to said encoding unit **(158, Fig. 4A, which gets all the video packets- ATM, IP, or IP over ATM- or video data and recognizes if they are sent to video client –if they contain MPEG data- and encapsulates it in IP packets –or other type of format, ATM, etc- and send them to the routing process 86, which associates the IP address to an Ethernet address and send it to the requesting device. By assigning a Ethernet address of a network adapter or of a pc, for example, identification of the data and its routing to the respective decoders or processors is performed, [0124]-[0127]; [0139]-[0141]; [0165]-[0174]; [0214]).**

Claim 9 has been analyzed and rejected above in view of claims 5 and 6.

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4. Claims **10-17** are rejected under 35 U.S.C. 102(e) as being anticipated by Monta et al. (hereinafter 'Monta', Patent No. 7,039,048).

Regarding claim 10, Monta teaches an apparatus comprising (**Cherrypicker multiplexer- abstract, col. 3 line 23-col. 4 line 15, where the cherrypicker controls the digital transport stream that will be received on a digital settop box- col. 15 line 15-27; col. 16 line 52-67**):

a data receiving unit being connected to at least two ports, (**Packet Switch 10 in conjunction with IP wrapper 12 receive packets of data from DSL and cable headends, satellite feeds, web broadcasting servers that serve their data through Ethernet type of interface, 28, 36 and DSL or cable interface 62, Fig. 1- col. 4 lines 35-60**), said data receiving unit receiving signals from at least one selected from among an asynchronous transfer mode network and an Internet protocol network, the signals corresponding to at least one selected from among asynchronous transfer mode digital broadcasting, asynchronous transfer mode video on demand, Internet protocol mode digital broadcasting, and Internet protocol video on demand, said data receiving unit identifying the received signals by determining when the received signals are asynchronous transfer mode data, when the received signals are Internet protocol over asynchronous transfer mode data, and when the received signals are Internet protocol data, said data receiving unit transmitting information corresponding to the received signals in dependence upon the identifying (**col. 4 lines 35-60, col. 3 line 59-col. 4 line 15, col. 2 line 5-31, col. 5 lines 16- 55, where, as it is well known, metro area**

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headends use ATM networks for transmitting packets. The type of data is determined depending on the interface the data is being received or by the headers the streams posses);

an extracting unit determining when the transmitted information corresponds to a portion of a Moving Picture Experts Group transport stream and when the transmitted information corresponds to Internet protocol packet data, said extracting unit extracting valid cells from asynchronous transfer mode cells when the transmitted information includes asynchronous transfer mode cells **(col. 3 line 59- col. 4 line 15; col. 5 lines 29-46; col. 17 lines 1-35; col. 19 lines 8-21; col. 22 lines 38-67);**

a transport stream forming unit receiving the extracted valid cells, modifying the extracted valid cells to form modified cells, the modifying including removing a predetermined byte of head information and overhead information from the extracted valid cells, forming the Moving Picture Experts Group transport stream by reassembling the modified cells **(col. 15 line 9-col. 18 line 29; col. 19 lines 8- 33; col. 20 lines 1-24; col. 23 line 34- col. 24 line 17);** and outputting video data to be transformed and then displayed by a video display **(col. 15 lines 15-27; col. 16 lines 52-67).**

Regarding claim 11, Monta teaches an apparatus wherein the predetermined information including a predetermined byte of head information and overhead information **(col. 19 lines 8-54; col. 23 line 60 -col. 24 line 16).**

Regarding claims 12 and 13, Monta teaches an apparatus with at least two ports including subscriber line port and an Ethernet port **(Packet Switch 10 in conjunction**

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with IP wrapper 12 receive packets of data from DSL and cable headends, satellite feeds, web broadcasting servers that serve their data through Ethernet type of interface, 28, 36 and DSL or cable interface 62, Fig. 1- col. 4 lines 35-60)..

Regarding claims 14 and 17, Monta teaches an apparatus further comprising:
a data transforming unit further performing transforming after said transport stream forming unit outputs the video data **(settop box, col. 15 lines 15-27; col. 16 lines 52-67)**, said data transforming unit comprising: comprising:

a decoding unit decoding the Moving Picture Experts Group transport stream transmitted from said transport stream forming unit; and an encoding unit encoding the Moving Picture Experts Group transport stream decoded by said decoding unit to be displayed by the video display **(It is inherent that every settop box that is capable of receiving MPEG transport streams is able to decode and encode it for consequent video content display at any display).**

Regarding claim 15, Monta teaches an apparatus further comprising:
a processing unit receiving the Internet protocol over asynchronous transfer mode data from said digital subscriber line receiving unit, said processing unit receiving the Internet protocol data from said digital subscriber line receiving unit, said processing unit extracting valid cells from the Internet protocol over asynchronous transfer mode data and the Internet protocol data received from said digital subscriber line; said processing unit receiving the Internet protocol data from said Ethernet receiving unit and

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extracting valid cells from the Internet protocol data received from said Ethernet receiving unit (**col. 3 line 59- col. 4 line 15; col. 5 lines 29-46; col. 17 lines 1-35; col. 19 lines 8-21; col. 22 lines 38-67**).

Regarding claim 16, Monta teaches an apparatus further comprising:

a control unit determining when the valid cells extracted from the asynchronous transfer mode cells by said extracting unit correspond to at least one selected from among the Moving Picture Experts Group transport stream and general Internet data, determining when the valid cells extracted from the Internet protocol over asynchronous transfer mode data by said processing unit correspond to at least one selected from among the Moving Picture Experts Group transport stream and the general Internet data, and determining when the valid cells extracted from the Internet protocol data by said processing unit correspond to at least one selected from among the Moving Picture Experts Group transport stream and the general Internet data, said control unit re-assembling the cells in dependence upon the determining, said control unit transmitting the Moving Picture Experts Group transport stream to said decoding unit, and said control unit transmitting the general Internet data to said encoding unit (**col. 22 line 39- col. 23 line 32**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR PARRA whose telephone number is (571)270-1449. The examiner can normally be reached on 9-6 PM (M-F, every other Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OP

/Hunter B. Lonsberry/
Primary Examiner, Art Unit 2623